

Lokendra R. SHARMA\* & Syo KUROKAWA\*\*: **Species of  
*Xanthoparmelia* in Nepal**

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Although species of *Xanthoparmelia* are well differentiated in the Southern Hemisphere, especially in Australia and Africa and have been well studied by various lichenologists, Nepalese species of the genus have been scarcely studied. Kurokawa (1989) recently reported the occurrence of only one species of the genus (*X. tuberculiformis* Kurok.). However, our current study approved the occurrence of two other species of the genus in Nepal. Morphological and chemical features of these two species, including one species new to science, will be reported in the present paper.

***Xanthoparmelia coreana*** (Gyeln.) Kurok., Journ. Jap. Bot. 64: 167, 1989.

Thallus saxicolous, loosely adnate on rocks, yellowish green; lobes sublinear-elongate, rounded in the apices, 0.5–2.0 mm wide; upper surface smooth, shining, with distinct brownish black margin near the apices, isidia laminal, often dark brown-tipped, simple isidia often subglobose, branched isidia subcoralloid, more or less constricted at the base of branchlets; lower surface smooth, pale brown, darkened and shining towards the apices, rhizines sparse, mostly simple. Apothecia not seen in Nepalese specimens.

Thallus K—; medulla C—, P+ intense yellow; containing usnic acid, salazinic acid, consalazinic and norstictic acid (trace).

The description recorded above was taken from Nepalese specimens, and it coincides well with the description given by Kurokawa (1989) for *X. coreana*. The present species has been reported from Japan, Korea, and north-eastern China, and this is the first record of the species from Nepal as well as from south-eastern Asia. Two specimens cited below were collected at almost the same locality at 3400–3800 m above the sea level in Central Nepal.

Specimens examined. Nepal: Langtang Valley, Bagmati, elevation about 3400 m, T. Iwashina 516 (TNS); Kyangjin, Lantang Valley, Bagmati, elevation

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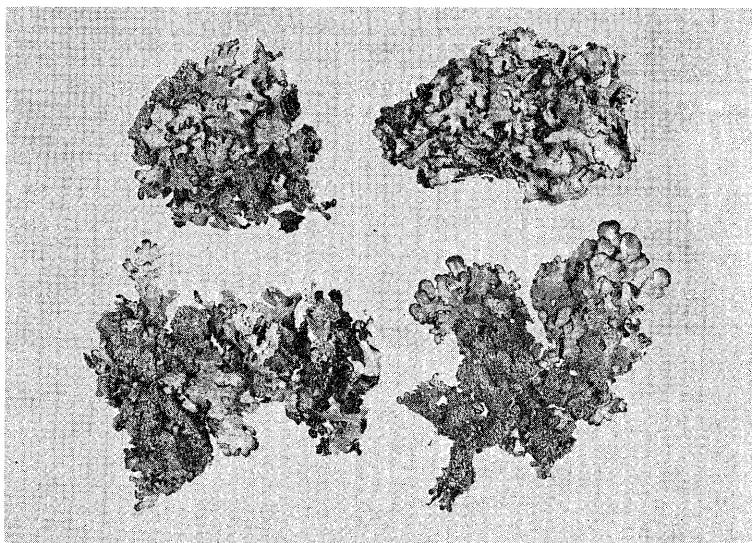


Fig. 1. Part of holotype of *Xanthoparmelia nepalensis* ( $\times 1.1$ ).

about 3850 m, T. Iwashina 529 (TNS).

***Xanthoparmelia nepalensis*** Sharma et Kurok., sp. nov. (Fig. 1)

Species habitu cum *X. coreana* optime congruens, sed differt medulla flava in parte inferiore.

Thallus saxicolous loosely adnate, yellowish green, lobes subirregular, rounded in the apices, 0.5–2.0 mm wide; upper surface smooth, shiny, grayish black-margined near the apices; isidia laminal, often brown-tipped, simple isidia subglobose, 0.2–0.4 mm in diameter, 0.5–0.6 mm in height, branched isidia subcoralloid, 0.2–0.4 mm in diameter, 0.7–0.8 mm in height; medulla white, but yellow to orange-yellow in part in the lower half; lower surface smooth, pale brown, darkened and shining towards the apices; rhizines sparse, mostly simple, 1–1.5 mm long. Thallus 150–250  $\mu\text{m}$  thick; upper cortex 2–3 celled, 12.5–15  $\mu\text{m}$  thick; algal layer variable in thickness, 30–75  $\mu\text{m}$  thick; medulla 85–120  $\mu\text{m}$  thick; lower cortex pale brown, 2–3(–4) celled, 12.5–15  $\mu\text{m}$  thick.

Thallus K–; medulla K+ yellow turning red, C–, P+ intense yellow, yellow lower medulla K+ purple; containing usnic acid, salazinic acid, consalazinic acid, norstictic acid (trace), and skyrin.

Type collection. Nepal, Kyangjin, Lantang Valley, Bagmati, elevation about 3900 m, T. Iwashina 530—holotype in TNS and isotype in the National Herbarium (Herb. KATH) of Nepal.

This new species resembles *X. coreana* in having subglobose to subcoralloid and often brown tipped isidia. However, the thallus and the isidia of the present species are a little thinner than those of *X. coreana*. In addition, the present new species contains skyrin in the lower half of the medulla. Skyrin has been known in only five isidiate species of *Xanthoparmelia*, four of them are African species and the other is Australian species. Of four African species, two contain hypoprotocetraric acid, one contains protocetraric acid, and the other hypostictic acid and its associated substances. The Australian species contains mainly lobaric acid and fatty acids. Therefore, *X. nepalensis* is clearly distinguished from other isidiate species producing skyrin by the presence of salazinic acid. In addition, this is the first record of the production of skyrin in Asian species of *Xanthoparmelia*. At present, this species is known only from the type locality in Central Nepal, where it seems to be endemic.

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#### Literature cited

Kurokawa, S. 1989. Studies on Japanese species of *Xanthoparmelia* (Parmeliaceae) (1). Journ. Jap. Bot. 64: 165-175.

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ネパール産のキクバゴケ属については、現在まではほとんど研究が進んでおらず、最近黒川 (1989) がキクバゴケモドキを報告したのが唯一の種類である。岩科 司君が一昨年 (1988) ネパールで採集した地衣の中に数点のキクバゴケ属の標本があり、これを調査した結果次の 2 種を加えることができた。1 種は日本、朝鮮および中国東北部から知られている ヤマキクバゴケ であり、他の 1 種は新種であった。新種は *X. nepalensis* (ネパールキクバゴケ) と命名したが、ウスニン酸、サラチン酸、コンサラチン酸と微量のノルスチクチン酸を含み、さらに髄層下部にスカイリンを含んでいる。アジアでスカイリンを含むキクバゴケ属地衣が発見されたのは最初である。